

A. AMENDMENTS TO CLAIMS

Please amend the claims as indicated hereinafter.

1 1. (PREVIOUSLY PRESENTED) A method of debugging a first software program, the
2 method comprising the steps of:
3 preserving a memory state of a preserved portion of the first software program;
4 dynamically linking a second software program to the first software program without
5 deallocating from volatile memory the first software program;
6 executing the second software program; and
7 if execution of the second software program would otherwise cause modification to
8 targeted data that is in the preserved portion of the first software program,
9 then making a copy of the targeted data and modifying the copy of the
10 targeted data to generate a modified copy of the targeted data without
11 modifying the targeted data that is in the preserved portion of the first
12 software program.

1 2. (ORIGINAL) The method of Claim 1, further comprising the steps of:
2 publishing in the preserved portion of the first software program a corresponding
3 symbolic name associated with the second software program; and
4 multiple users accessing the second software program is accessed through the
5 corresponding symbolic name.

1 3. (ORIGINAL) The method of Claim 1, wherein the first software program is a
2 database system.

1 4. (ORIGINAL) The method of Claim 1, wherein the step of preserving a memory
2 state further includes the step of suspending a failed application of the database
3 system.

1 5. (ORIGINAL) The method of Claim 1, further including the step of, in response to
2 a subsequent attempt to access the targeted data in the preserved portion of the
3 first software program, accessing the modified copy of the targeted data.

1 6. (ORIGINAL) The method of Claim 5, wherein the steps of dynamically linking
2 and executing are initiated by a particular user, and wherein the step of accessing
3 the modified copy occurs only if that particular user initiates the subsequent
4 attempt to access the targeted data.

1 7. (ORIGINAL) The method of Claim 1, wherein:
2 the steps of dynamically linking and executing the second software program are
3 performed by a first user;
4 the modified copy is a first modified copy of the targeted data; and
5 the method further comprises the steps of:
6 after the first modified copy has been created for the first user, a second user
7 executing performing an operation which, when executed, would cause
8 modification to the targeted data in the preserved portion; and

9 performing the operation by making a second copy of the targeted data and
10 modifying the second copy to generate a second modified copy of the
11 targeted data, the second modified copy being separate from the first
12 modified copy and from the preserved portion.

1 8. (ORIGINAL) The method of Claim 7, further comprising the steps of:
2 after the first and second modified copies have been created for the first user and
3 second user respectively, a third user dynamically linking and executing a
4 third software program which, when executed, would cause modification to
5 the targeted data in the preserved portion; and
6 making a third copy of the targeted data and modifying the third copy to generate a
7 third modified copy, the third modified copy being separate from the first
8 modified copy, from the second modified copy, and from the preserved
9 portion.

1 9. (PREVIOUSLY PRESENTED) A computer-readable medium bearing instructions
2 for debugging a first software program, the instructions arranged, when executed by
3 one or more processors, to cause the one or more processors to perform the steps of:
4 preserving a memory state of a preserved portion of the first software program;
5 dynamically linking a second software program to the first software program without
6 deallocating from volatile memory the first software program;
7 executing the second software program; and

8 if execution of the second software program would otherwise cause modification to
9 targeted data that is in the preserved portion of the first software program,
10 then making a copy of the targeted data and modifying the copy of the
11 targeted data to generate a modified copy of the targeted data without
12 modifying the targeted data that is in the preserved portion of the first
13 software program.

1 10. (ORIGINAL) The computer-readable medium of Claim 9, further comprising the
2 steps of:
3 publishing in the preserved portion of the first software program a corresponding
4 symbolic name associated with the second software program; and
5 multiple users accessing the second software program is accessed through the
6 corresponding symbolic name.

1 11. (ORIGINAL) The computer-readable medium of Claim 9, wherein the first software
2 program is a database system.

1 12. (ORIGINAL) The computer-readable medium of Claim 9, wherein the step of
2 preserving a memory state further includes the step of suspending a failed
3 application of the database system.

1 13. (ORIGINAL) The computer-readable medium of Claim 9, further including the
2 step of, in response to a subsequent attempt to access the targeted data in the

3 preserved portion of the first software program, accessing the modified copy of
4 the targeted data.

1 14. (ORIGINAL) The computer-readable medium of Claim 13, wherein the steps of
2 dynamically linking and executing are initiated by a particular user, and wherein
3 the step of accessing the modified copy occurs only if that particular user initiates
4 the subsequent attempt to access the targeted data.

1 15. (ORIGINAL) The computer-readable medium of Claim 9, wherein:
2 the steps of dynamically linking and executing the second software program are
3 performed by a first user;

4 the modified copy is a first modified copy of the targeted data; and
5 the method further comprises the steps of:

6 after the first modified copy has been created for the first user, a second user
7 executing performing an operation which, when executed, would cause
8 modification to the targeted data in the preserved portion; and
9 performing the operation by making a second copy of the targeted data and
10 modifying the second copy to generate a second modified copy of the
11 targeted data, the second modified copy being separate from the first
12 modified copy and from the preserved portion.

1 16. (ORIGINAL) The computer-readable medium of Claim 15, further comprising the
2 steps of:

3 after the first and second modified copies have been created for the first user and
4 second user respectively, a third user dynamically linking and executing a
5 third software program which, when executed, would cause modification to
6 the targeted data in the preserved portion; and
7 making a third copy of the targeted data and modifying the third copy to generate a
8 third modified copy, the third modified copy being separate from the first
9 modified copy, from the second modified copy, and from the preserved
10 portion.

B1
1 17. (PREVIOUSLY PRESENTED) An apparatus for debugging a first software program,
2 wherein the apparatus comprises a memory storing one or more instructions which,
3 when executed by one or more processors, cause the one or more processors to
4 perform the steps of:
5 preserving a memory state of a preserved portion of the first software program;
6 dynamically linking a second software program to the first software program without
7 deallocating from volatile memory the first software program;
8 executing the second software program; and
9 if execution of the second software program would otherwise cause modification to
10 targeted data that is in the preserved portion of the first software program,
11 then making a copy of the targeted data and modifying the copy of the
12 targeted data to generate a modified copy of the targeted data without
13 modifying the targeted data that is in the preserved portion of the first
14 software program.

1 18. (CURRENTLY AMENDED) The ~~computer-readable medium~~ apparatus of Claim 17,
2 wherein the memory includes one or more additional instructions which, when
3 executed by the one or more processors, cause the one or more processors to perform
4 the additional steps of:
5 publishing in the preserved portion of the first software program a corresponding
6 symbolic name associated with the second software program; and
7 multiple users accessing the second software program is accessed through the
8 corresponding symbolic name.

1 19. (CURRENTLY AMENDED) The ~~computer-readable medium~~ apparatus of Claim 17,
2 wherein the first software program is a database system.

B1
1 20. (CURRENTLY AMENDED) The ~~computer-readable medium~~ apparatus of Claim
2 17, wherein the step of preserving a memory state further includes the step of
3 suspending a failed application of the database system.

1 21. (CURRENTLY AMENDED) The ~~computer-readable medium~~ apparatus of Claim
2 17, wherein the memory includes one or more additional instructions which, when
3 executed by the one or more processors, cause the one or more processors to
4 perform the additional step of, in response to a subsequent attempt to access the
5 targeted data in the preserved portion of the first software program, accessing the
6 modified copy of the targeted data.

1 22. (CURRENTLY AMENDED) The ~~computer-readable medium~~ apparatus of Claim
2 21, wherein the steps of dynamically linking and executing are initiated by a
3 particular user, and wherein the step of accessing the modified copy occurs only if
4 that particular user initiates the subsequent attempt to access the targeted data.

1 23. (CURRENTLY AMENDED) The ~~computer-readable medium~~ apparatus of Claim 17,
2 wherein:
3 the steps of dynamically linking and executing the second software program are
4 performed by a first user;
5 the modified copy is a first modified copy of the targeted data; and
6 wherein the memory includes one or more additional instructions which, when
7 executed by the one or more processors, cause the one or more processors to
8 perform the additional steps of:
9 after the first modified copy has been created for the first user, a second user
10 executing performing an operation which, when executed, would cause
11 modification to the targeted data in the preserved portion; and
12 performing the operation by making a second copy of the targeted data and
13 modifying the second copy to generate a second modified copy of the
14 targeted data, the second modified copy being separate from the first
15 modified copy and from the preserved portion.

1 24. (CURRENTLY AMENDED) The ~~computer-readable medium~~ apparatus of Claim 23,
2 wherein the memory includes one or more additional instructions which, when

B1

3 executed by the one or more processors, cause the one or more processors to perform
4 the additional steps of:
5 after the first and second modified copies have been created for the first user and
6 second user respectively, a third user dynamically linking and executing a
7 third software program which, when executed, would cause modification to
8 the targeted data in the preserved portion; and
9 making a third copy of the targeted data and modifying the third copy to generate a
10 third modified copy, the third modified copy being separate from the first
11 modified copy, from the second modified copy, and from the preserved
12 portion.
